

राज्यातील सर्व महानगरपालिका व "अ" वर्ग नगरपालिका/परिषदांना पर्यावरण सदय:स्थिती अहवाल तयार करण्यासाठीच्या मार्गदर्शक सूचना...

**महाराष्ट्र शासन  
पर्यावरण विभाग, भंडारालय,**

शासन निर्णय क्रमांक : ईएसआर-२०१०/प्र.क्र.४०/२०१०/ता.क.१  
नविन प्रशासन भवन, १५ वा मजला, मादाश कामा रोड, मुंबई- ४०० ०३२  
दिनांक: ४ जून, २०१०

**प्रस्तावना:-**

भारतीय संविधानाच्या ७४ च्या घटना दुरुस्तीनुसार सर्व महानगरपालिका व "अ" वर्ग नगरपालिका / परिषद यांनी दरवर्षी त्यांच्या कार्यक्षेत्रासाठी पर्यावरण सदय:स्थिती अहवाल तयार करून प्रसिध्द करणे बंधनकारक आहे. प्रत्येक शहरासाठी पर्यावरण स्थिती दर्शक अहवालामुळे संबंधित परिक्षेत्रातील पर्यावरण विषयक भेडसावणाऱ्या गंभीर समस्यांची तसेच संभाव्य अथवा सुरू असलेल्या विकारकामामुळे पर्यावरणास हानी पोहोचवणाऱ्या महत्वाच्या बाबींची माहिती मिळते. शहराचा विकास आराखडा करतानाही त्यांचा उपयोग होऊन सर्वंकष पर्यावरण धोरण तयार करून त्यांची अंमलबजावणी करण्यासाठी सदर अहवाल सहायकारी ठरतो.

राज्यामध्ये सन १९९७ पासूनच विविध महानगरपालिका व अ वर्ग नगरपालिका / परिषद यांनी तयार केलेल्या पर्यावरण सदय:स्थिती अहवालाची तपासणी केली असता, त्यामध्ये सुसूत्रता नसणे, आवश्यक त्या पर्यावरण विषयक महत्वाच्या बाबींचा समावेश नसणे इत्यादी त्रुटी आढळून आल्या आहेत. त्यामुळे पर्यावरण सदय:स्थिती अहवालामध्ये अंतर्भूत करण्याच्या बाबी, अहवाल तयार करण्यासाठी अवलंबिण्याची पध्दत, निकष व निकषावर आधारित कृती आराखडा बनविणे यासाठी सविस्तर कार्यपध्दती तयार करणे इ. चा प्रस्ताव शासनाच्या विचाराधीन होता.

**शासन निर्णय:-**

१. राज्यातील सर्व महानगरपालिका व "अ" वर्ग नगरपालिका / परिषद यांनी दरवर्षी दिनांक ३१ जुलै पर्यंत पर्यावरण सदय:स्थिती अहवाल तयार करून तो शासनाच्या नगर विकास विभाग व पर्यावरण विभाग तसेच महाराष्ट्र प्रदूषण नियंत्रण मंडळ यांना सादर करावा.
२. पर्यावरण सदय:स्थिती अहवाल तयार करताना अवलंबिण्याच्या पध्दती तसेच अहवालामध्ये अंतर्भूत करावयाच्या बाबी याबाबतीत सविस्तर कार्यपध्दती तयार करण्यात आली असून त्यानुसार सर्व महानगरपालिका व "अ" वर्ग नगरपालिका / परिषद यांनी पर्यावरण सदय:स्थिती अहवाल तयार करणे आवश्यक राईल. (परिशिष्ट "अ")


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रोटा/एच-११२८[५००-६-१०]-१

३. सदर कार्यपद्धतीमध्ये शहराचा अंतर्गत विकास व त्यामुळे उद्भवणारे प्रश्न, पर्यावरणाची सद्यःस्थिती, विकासांमुळे पर्यावरणावर होणारा परिणाम व तो रोखण्याची उपाययोजनाचा समावेश असून त्यामध्ये स्थानिक नागरिकांचा प्रत्यक्ष सहभाग त्यामध्ये असणे ही अत्यंत महत्वाची बाब आहे.
४. सर्व महानगरपालिका व “अ” वर्ग नगरपालिका / परिषद यांनी सदर पर्यावरण विषयक सद्यःस्थिती अहवाल त्यांच्या संकेतस्थळावर (website) नागरिकांसाठी उपलब्ध करून देणे आवश्यक आहे.
५. पर्यावरण सद्यःस्थिती अहवालाचा उपयोग महानगरपालिका व “अ” वर्ग नगरपालिका / परिषद यांनी त्यांचे क्षेत्रात विकास कार्यक्रम व मुलभूत सुविधांचे नियोजन करताना प्राधान्यक्रम ठरवताना व अंमलबजावणी करताना करणे आवश्यक राहिल.
६. पर्यावरण सद्यःस्थिती अहवालामध्ये विविध नागरी सुविधांची सद्यस्थिती, त्यातील त्रुटी व या त्रुटींची पूर्तता करण्यासाठी समयबद्ध अंमलबजावणी कृती आराखडा तसेच वितीय नियोजन याचा विशेष उल्लेख आवश्यक आहे.

सदर शासन निर्णय महाराष्ट्र शासनाच्या [www.maharashtra.gov.in](http://www.maharashtra.gov.in) या वेबसाईटवर उपलब्ध करण्यात आला असून त्याचा संकेतांक क्र. २०१००६०४१५८५८००१ हा आहे.

महाराष्ट्राचे राज्यपाल याच्या आदेशानुसार व नावाने.

  
(ग.नि.वराडे)  
संचालक, महाराष्ट्र शासन

प्रत माहितीसाठी:-

मा. मुख्यमंत्र्यांचे प्रधान सचिव

मा. उपमुख्यमंत्र्यांचे प्रधान सचिव

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Sac/gr/soer

एच-११२८-१अ

सचिव, पर्यावरण

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सर्व जिल्हाधिकारी

सर्व पोलीस आयुक्त / उप आयुक्त

सर्व जिल्हा पोलीस अधिक्षक / उप अधिक्षक

पर्यावरण विभाग सर्व अधिकारी / कार्यासन/ निवडनस्ती - तांक १

सर्व महानगरपालिका व नगरपालिका

## Background

Preparation of Environmental Status Reports (ESRs) is mandated in the state-level legislation (the BPMC Act) following the 74th Constitutional Amendment Act and the Twelfth Schedule. Cities in **Maharashtra** have been publishing **ESR** since 1997.

ESR is comprehensive document that serves as information resource for identification of critical issues and also as an input for new / revision of city development plan. ESR attempts to identify city level current and emerging concerns that can pose risk to environment and health & safety of the citizens as well as opportunities that can enhance the quality of life. ESR also encourages the Urban Local Body (ULB) to formulate and adopt an overarching environmental policy so that the environmental and social considerations get mainstreamed into practice.

Many of the ESRs use environmental data collected by Maharashtra Pollution Control Board (MPCB). MPCB evaluated 42 ESRs prepared by 12 cities over the period of 5 years (2003 - 08). This report captioned as 'Evaluation of Environmental Status Reports for cities in Maharashtra' is available on MPCB's website ([http://mpcb.gov.in/images/pdf/Evaluation\\_of\\_ESRs.pdf](http://mpcb.gov.in/images/pdf/Evaluation_of_ESRs.pdf))

Some of the major observations from this evaluation are as follows -

- ❑ Most ESRs do not report complete information on various environmental components on a consistent basis. Sometimes, the sources of information are not reported
- ❑ Most of the data used to prepare ESRs is largely secondary. There is a need for the ULBs to undertake collection of primary data.
- ❑ There is very little use of maps to present the issues and opportunities. Most of the information is presented in textual form using tables and graphs.
- ❑ The action plans recommended are often "generic". Details like project locations, technical features, funding requirements and implementation arrangements are not provided.
- ❑ Process to prepare ESR does not involve stakeholders. The ESR is prepared without inputs from the stakeholders.
- ❑ Reports are submitted to Ministry of Urban Development (MoUD) and are sometimes published on respective ULB's web-sites. But efforts to inform citizens on accessing the ESR are not undertaken.

Environmental Status Report (G.R. ESR-2010/307/c.r.40/2010 )

To overcome these limitations and to enhance quality of ESR, MPCB has developed a guideline to prepare ESR and proposed a model Table of Content. ULBs are encouraged to use these guidance materials for the preparation of the ESR

In most of the cases, ULB's appoint consultant/s to prepare ESR for full or partial work. It is important that consultants also follow the recommended ESR preparation process. Section A of the Guidance provides an outline Terms of Reference or listing of Tasks for preparation of the ESR. Customization of the tasks should be however done to address the city-specific requirements.

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<b>Section A: Guidance for the Preparation of ESR</b>	
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## **1. Appointment of Agency**

ULB may appoint an external agency for full or partial scope of work to prepare ESR for city / town. ULB may undertake preparation of ESR on its own as well as using internal resources or by using specific support or inputs of the external agency. Eligibility criteria for such an agency shall be –

- ☐ Educational Institutions of the area (Technical)
- ☐ Minimum five years' experience in the field of Environment
- ☐ Should have at least one environmental planner in the team
- ☐ Should have past experience of preparing ESR for city
- ☐ The agency could be a private consultant or an academic / research institution or experienced environmental NGO

## **2. Description of the Tasks**

### **2.1. Objective**

The objective of the Project is to prepare the ESR following the process and methodology involving stakeholders' consultations and by following DPSIR framework. Driving Force-Pressure-State-Impact-Response (D-P-S-I-R) framework provides a good analytical base to identify issues as well as opportunities and develop a response or an Action Plan. The Action Plan generated through DPSIR approach will consist of 4 Ps that is Projects, Programmes, Plans and Policies. Stakeholders' consultation is important to enable the participatory approach and develop a sense of ownership towards the city's environment.

### **2.2. Scope**

The Project Scope includes preparation of City ESR for given city / town in Maharashtra addressing all relevant environmental components (such as air, water), infrastructure services (such as transportation, sewage and sanitation), and governance (policies, laws and regulations). Scope of work includes tasks such as data collection, analysis, reporting etc. As elaborated in next section.

### **2.3. Proposed Tasks**

In order to prepare the ESR for given city / town, the tasks may consist as following –

1. Formation of Working Group
2. Review of past ESRs and other associated Reports
3. Conduct of first Stakeholders' Consultation Workshop

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4. Data Collection and Review
5. Assessment based on D-P-S-I-R Framework
6. Developing Action Plan with second Stakeholders' Consultation Workshop
7. Preparation of Draft ESR
8. Conduct of third Stakeholders' Consultation Workshop
9. Finalization of ESR
10. Approval ESR from ULB
11. Dissemination of ESR

#### **a. Formation of Working Group**

In order to build capacity and ownership at the corporation/council, a Working Group should be formed. The Working Group may consist of 3/4 staff members of Corporation / Council and in addition key ex-officio members selected from University, research organizations, environmental NGOs, industry / business associations. The Working Group may be formed under the direction of the Commissioner with identified Head/Coordinator responsible. This Working Group may assisted by agency appointed for ESR preparation.

#### **b. Review of past ESRs and other associated Reports**

This task shall include the broad level understanding of the city such as, what are the major driving factors of the city (whether the city is industrial or agricultural based or majorly dependant on service sector etc.), what are the major issues economic, environmental and social issues. This understanding helps in identifying areas of concerns and effectiveness of past and ongoing environmental management actions.

A brief report may be prepared on this basis captioned "Situation Analyses" that could be communicated to the key city stakeholders before first Stakeholders' Consultation Workshop. This report shall make use of maps and visuals to help easy capture and understanding of the issues as well as opportunities.

#### **c. Stakeholders' Consultation Workshop (1)**

Various stakeholders in City's environment will be identified under this task. These stakeholders may include representatives of –

1. Various departments in ULB (Water, sanitation, solid waste, transport, health, etc.)

2. Other government institutions like area development authorities, planning agencies, land & revenue department etc.
3. Industry and business associations, industrial development corporation etc.
4. Academic and Research institutions
5. Environmental NGOs active in the city
6. Consultants/Professionals working in environmental sector
7. Media personnel

ULB will be responsible for sending invites as well as organizing the Venue. The agency appointed may conduct the workshop jointly with the members of the Working Group.

The objective of this workshop is to discuss the present environmental status, issues and opportunities with the stakeholder. In this workshop, the objectives of preparing ESRs shall be explained to stakeholders. This interaction will also provide a platform to all stakeholders to share their concerns as well as initiatives for city environment. Also all stakeholders will be requested to participate in the process of preparing ESR as well as to extend their support by sharing available and authentic information.

Use of mapping techniques like Eco-maps and/or use of advanced technologies such as GIS is recommended to be used in this workshop to identify and locate the environmental issues as well as opportunities. The advantages of using the spatial techniques are ease in understating the issues, know the severity and context of the issue and to come up with area-wise prioritization. Refer to **Box 1** for definition of Eco-maps.

**Eco-maps** – Eco-mapping is a straightforward, practical tool for environmental management. This may use simple hand drawn maps or GIS based technologically advanced versions to map the water, energy, waste, noise, soil contamination and environmental risks of a business. Web-based platforms are also used. e.g. <http://urbanecomap.org/>

Eco-mapping is a simple 'step by step' process that gathers information on environmental issues and opportunities and formulates an Environmental Action Plan.

This workshop may be a half day workshop preferably conducted post office hours to ensure more participation of stakeholders.

The consultation process in ESR needs to continue and conducted across larger group of stakeholders. In fact, all citizens need to be involved on an active basis. This can be achieved by various ways as –

1. Workshops at various levels (ward level, etc.)
2. Programmes for different age-groups as school children, youth, senior citizens etc.
3. Communication through ALMs
4. Designated information hubs in the city where citizens will get information as well as they can share.
5. Dedicated web sites where citizens can log in for information and share the information. Map based web-sites will have additional advantages as they will give locational information on maps which is easy to understand and analyse. Such platforms become useful in this context given the penetration and use of World Wide Web today – especially on 24 x 7 basis. As an illustration, website [www.ecocityindia.org](http://www.ecocityindia.org) can be visited.

In this workshop, presentation of the environmental policy of the city, goals and objectives should be made. If the policy, goals and objectives are not formulated; then the same will need be framed. In this case, a full day workshop will need to held. It will be useful if draft environmental policy, goals and objectives are drafted in advance and then discussed post session on eco-mapping.

#### **d. Data Collection and Review**

The relevant data from various stakeholders shall be collected and reviewed. The task of data collection will include collection of both primary and secondary information. Surveys and monitoring shall be conducted as required following the standard and good practices.

Data review under this task will include checking quality, consistency and completeness. Data review will also help to identify the data gaps and collect the remaining information accordingly wherever possible.

The first consultation workshop may provide lead to obtain additional data from the stakeholders.

#### **e. Assessment based on D-P-S-I-R Framework**

D-P-S-I-R Framework will provide the analytical base for developing ESR. Refer Box 2 for definition of D-P-S-I-R Framework.

DPSIR is a general framework for organising information about state of the environment. The framework assumes cause-effect relationships between interacting components of social, economic, and environmental systems, which are

- Driving forces of environmental change (e.g. industrial production)
- Pressures on the environment (e.g. discharges of waste water)
- State of the environment (e.g. water quality in rivers and lakes)
- Impacts on population, economy, ecosystems (e.g. water unsuitable for drinking)
- Response of the society (e.g. wastewater treatment, watershed protection)

With regard to the status, the existing as well as past Responses or Actions will be assessed. Responses will include the Initiatives taken so far by various stakeholders. For example, awareness campaigns, decentralized treatment of solid waste, promotion of CNG, afforestation etc. Refer Table 1 below for data structured in DPSIR framework as an illustration.

**Table 1. - Data structured in DPSIR framework as an Illustration**

D-P-S-I-R	Component	Data required
Driver	Educational Hub	Number of Educational Institutions
		Number of in migrating student population annually
Pressure	Water Supply	% of households connected by service connection
		Unaccounted for water
		Staff per 1000 connections
	Transport	Road area as % of ward area
		% of population travelling by public transport
State	Air	% of public vehicles running on CNG
		Ambient air quality
	Water	Noise
		Water quality-Sea
		Water quality-River

D-P-S-I-R	Component	Data required
		Water quality-Lakes
Impact	Health	Number of deaths due to diseases related to air pollution
		Number of water borne epidemics
		Number of deaths due to water borne diseases
Response	Alternative water sources	Rain water Harvesting schemes
		Tapping leakages
	Sewage	Decentralized Sewage treatment Schemes
	Transport	Increase in Public Transport - buses

#### **f. Developing Action Plan with Second Stakeholders' Consultation**

Action Plan shall be in line with the Environmental Policy of the ULB. If the ULB has already defined the Policy with Vision, Mission, Goals and Objectives then the same may need to be re-visited. Modifications in the same shall be done in consensus with ULB if required.

The Policy shall be approved by the ULB and disseminated to stakeholders and citizens through various ways as discussed in Section C.

Based on the assessments, Consultant shall prioritize the environmental issues and necessary responses to develop Action Plan in line with the Environmental Policy. Prioritization of issues and respective actions will need to be done based on objective criteria. Further, actions / interventions to manage and enhance the environment shall be specific and implementable. Each action shall be detailed out in Action Sheets to include –

- ☐ **Action** (title)
- ☐ **Type of Action** (Project / Programme / Plan / Policy)
- ☐ **Purpose** (to give the basis of action. What all issues will be resolved with this action or what opportunities will be stimulated on the basis of which action is planned)
- ☐ **Location / Geographical extent of application / targeted beneficiaries** (mainly in case of programmes and policies)
- ☐ **Tasks** (delineating road-map for implementation)
- ☐ **Implementation plan** (as per the priority, implementation period shall be defined for each action. For example, high priority actions shall start immediately. State tentative completion date or duration of action wherever possible).

- ❑ **Responsibility allocation** (Responsibilities may assigned to relevant departments in Corporation / Council. Highlight the outsourcing requirements wherever relevant)
- ❑ **Budgetary requirements** (these can be broad level estimates for implementation)
- ❑ **Recommendations** (if particular action needs study or survey to be carried out or pilot to be implemented, such recommendations shall be covered in action sheets)
- ❑ **Illustrations** - Give illustrations where particular interventions are already implemented elsewhere.

The Working Group shall organize a full day second Stakeholders' Consultation workshop to discuss and finalize the developed Action Plan, especially the Action Sheets. Action Sheets shall be circulated among the stakeholders in advance for review and comments.

#### **g. Preparation of draft ESR**

Draft ESR shall be prepared following the Table of Contents outlined in **Section 3** reflecting the outcomes of the stakeholder consultation workshops. The Report may incorporate the contributions from stakeholders including citizens.

#### **h. Stakeholders' Third Consultation Workshop**

The draft ESR shall be shared with the stakeholders in this workshop. Stakeholders will be requested to comment on the analysis, action plan, conclusions and overall presentation of the report. The comments/contributions in this Stakeholder workshop shall be used to finalize the ESR.

The third Consultation Workshops could be over half day duration.

#### **i. Finalization of the ESR**

Final ESR may be prepared incorporating the recommendations from third Stakeholders' Consultation workshop.

#### **j. Approval of ESR from ULB**

The ESR shall be presented to the ULB's Council for approval. Working Group may make this presentation with the help of agency appointed. In approving the ESR the members of the Corporation / Council will need to give their consensus and support for the implementation of the action plan that include provision of requisite budgets and human resources.

#### **k. Dissemination of ESR**

The ESR shall be uploaded on Corporation / Council website. The final version may be designed to make the report attractive preferably printed on environment friendly paper and accompanied by a CD-ROM.

## 2.4. Outputs

Deliverables for this Project are as explained in Table 2

**Table 2. - Deliverables**

No	Task	Deliverables
1	Formation of Working Group for ESR preparation	
2	Review of past ESRs and other such Reports	Short note (5 to 10 pager) on City's environment including broad level issues (to be circulated in first Workshop)
3	Stakeholders' Consultation Workshop (1)	Workshop Report and Environmental Policy
4	Data Collection and Review	-
5	Assessment based on D-P-S-I-R Framework	Short note (8-10 pager) on city's environment structured in D-P-S-I-R Framework (to be circulated in second Workshop)
6	Developing Action Plan	Environmental Policy and Action Sheets
7	Preparation of Draft ESR	Draft ESR
8	Stakeholders' Consultation Workshop (3)	Workshop Report
9	Finalization of ESR	Final ESR
10	Approval of ESR	Presentation to ULB

## 2.5. Timelines

The ESR preparation shall be completed within **4 months** (16 weeks).

## 3. Model ToC for developing ESR

1. Executive Summary (in both Marathi and English)
2. Preamble to ESR
3. Background of ESRs

[What is ESR? Why do cities need to publish ESR? Role of ESR in improving the city environment]

#### 4. ESR Preparation Process

*[Details of the process that was followed for ESR preparation and how it is different from past ESRs. Use of flow charts is recommended.]*

##### 4.1. ESR Committee

*[Details of the committee- Members, headed by, contribution of the committee in the ESR preparation]*

##### 4.2. Summary of Workshops conducted and findings

*This should summarize all workshop reports and findings/ conclusions from workshops, including photographs.*

#### 5. Review of previous ESRs

*Important highlights from previous ESRs.*

##### 5.1. Key environmental issues

*Issues identified from past ESRs will be highlighted in this section*

#### 6. Situation Analysis

*This chapter form the base or foundation to prepare the Action Plan. All information shall be structured and analysed based on DPSIR frame-work. Structure information collected on thematic basis in the form of maps, graphs etc.*

##### 6.1. Driving Forces and Pressures

*Driving forces may include description and details about population and industrial growth, employment opportunities, which is leading to the pressures as increase in migration. Statistics, trends on such changes will need to be depicted in this section. Pressures should capture festivals, pilgrimages etc. if found significantly impacting.*

##### 6.2. State of Resources, Infrastructure and Services

*Resources: This section will have details about the resources as*

- ☐ Water
- ☐ Land,
- ☐ Air
- ☐ Flora and fauna (including Biodiversity)
- ☐ Parks and Recreational Amenities
- ☐ Public Health
- ☐ Heritage and Religious sites

*Infrastructure & Services: This section will incorporated the status of infrastructure services like*

- ☐ Water supply
- ☐ Sewage and sanitation,
- ☐ Storm water drainage
- ☐ Transportation
- ☐ Energy (Electricity and Fuel)
- ☐ Solid waste management including landfill area
- ☐ Tourism
- ☐ Education / research institutions

- ☐ Hospitals and Health Care Establishments
- ☐ Housing and Slum Areas
- ☐ Industrial zones
- ☐ Parking lots
- ☐ Common Environmental Infrastructure (e.g. common biomedical waste treatment and disposal facilities)

Interconnections between infrastructure services and natural resources should be explained, e.g. transportation – air pollution – health – impact on livelihood.

### 6.3. Risks and Impacts on Environment

This section will have description and assessment of impacts on key environmental components and their inter-linkages. Assessment of impacts will help to quantify the impacts as high medium low short term / long term, reversible / irreversible, direct or indirect.

A matrix representation or a map based presentation will be useful for better appreciation of the impacts. Risks should address possibility of spills, contaminations, fire and such disasters to help come up with zoning and buffer and indicate disaster management plans.

A root cause analyses may also be used. [Root cause analysis of impacts/risks helps in identification and prioritization of gaps. For example

1. Deteriorating Air Quality  
Areas of concern: Increasing amount of vehicles in the city  
Causes Barriers: Lack of efficient public transport, congestion on roads, adulterated fuel, poor signalling, no provision of enough parking spaces, no checks on fuel quality.
2. Critically polluted nallahs and river stretches  
Areas of concern: Increasing amount of untreated sewage in the local nallahs and rivers  
Causes: Lack of adequate sewage collection and treatment

## 7. Action Plan

Action Plan shall be in line with the environmental Policy of ULB. It will be in the form of responses in 4 P structure to the impacts assessed in above section. Responses will be detailed out up to operational level such as Response – Tasks – Tactics – Responsibility allocation – budgetary requirements – time estimates. The Response should capture existing good initiatives undertaken, what is working and what is not, why?

**Emissions of GHG are now an important area to factor in environmental inputs. It is important to make an attempt to quantify emissions of GHGs and come up with specific Action Plan.**

This chapter will have sub-sections as -

### 7.1. Environmental Policy

Policy Statement with Vision, Mission Goals, Objectives and Targets.

## 7.2. Action Plan

This section shall elaborate on Action Plan Structure and methodology. In other words, it should explain, how issues are prioritized and actions are defined.

## 7.3. Action Sheets

Action Plan shall be strengthen with the Action Sheets as explained

include details like, Workshop Objectives, Programme, Participants, Points Discussed and Conclusions.

### Annexure 2 – Data

Raw or processed data collected shall be compiled in Annexure with sources clearly cited.

### Annexure 3 - References